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**Fresenius AG**  
**D-61352 Bad Homburg v. d. Höhe**

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A sterility-maintaining connection system for medical systems and use thereof

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### **Claims**

1. A connection system for the connection of in particular two or more sterile systems, comprising at least a male connecting element (2) forming a closed end of a sterile, fluid-containing system and at least a female connecting element (1) forming the closed end of a second sterile, fluid-containing system which can be aseptically connected to one another,  
  
characterized in that  
  
both connecting elements (1, 2) each have a predetermined breaking point (7, 8) being arranged one above the other when the two connecting elements (1, 2) are assembled so that they form a common predetermined breaking point and can be broken off together, with the predetermined breaking point being located inside the fluid-containing system.
2. A connection system according to claim 1, characterized in that the two connecting elements (1, 2) can be connected to each other in a positively locking manner.

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3. A connection system according to one or more of the preceding claims, characterized in that the connecting elements (1, 2) can be connected to each other by means of a screw thread.
4. A connection system according to one or more of the preceding claims, characterized in that the connecting elements (1, 2) can be connected to each other by means of a snap-in connection.
5. A connection system according to one or more of the preceding claims, characterized in that the connecting elements (1, 2) can be connected to each other by means of an adhesive connection.
6. A connection system according to one or more of the preceding claims, characterized in that the adhesive connection is a quick-hardening adhesive.
7. A connection system according to one or more of the preceding claims, characterized in that a disinfectant is provided between the contacting contact surfaces (9, 11) of the connecting elements (1, 2).
8. A connection system according to the preceding claim, characterized in that the disinfectant has bonding properties.
9. A connection system according to the preceding claim, characterized in that the disinfectant is a quick-hardening adhesive.
10. A connection system according to one or more of the preceding claims, characterized in that cyanoacrylate is provided for connecting the two connecting elements (1, 2).
11. A connection system according to one or more of the preceding claims, characterized by a protective cap (22) the external contour of which is matched to the male connecting element.

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12. A connection system according to one or more of the preceding claims, characterized by a protective cap (22) in the form of a male connecting element that is connectable to the female connecting element (1) for the protection thereof.
13. A female connecting element (1) which forms the closed end of a fluid-containing system, for the connection with a male connecting element (2) which forms the end of a second fluid-containing system, characterized in that the female connecting element (1) has a predetermined breaking point (8).
14. A male connecting element (2) which forms the closed end of a fluid-containing system, for the connection with a female connecting element (1) which forms the end of a fluid-containing system, characterized in that the male connecting element (2) has a predetermined breaking point (7).
15. Use of a connection system according to claim 1 for the sterile transfer of fluid within a bag system, comprising at least two bags and a tube system.
16. Use of a connection system according to claim 15 for the sterile transfer of biological or medical fluids in a bag system having at least two bags and a tube system.
17. Use of a connection system according to claim 15 and 16 in a sterile blood bag system for the sterile transfer of blood or blood components.
18. Use of a connection system according to claims 15 to 17 in a bag and tube system having at least one filter element for the sterile transfer of blood or blood components.
19. Use of a connection system according to claim 15 in a bag system for the sterile transfer of infusion solutions or dialysis solutions.